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WIMP results from XENONnT with 3.1 tonne × year of exposure

Monday 25 August 2025 14:00 (20 minutes)

The XENONnT detector, operating with 5.9 tonnes of liquid xenon at LNGS, is designed for the direct detection of Weakly Interacting Massive Particles (WIMPs) in the Universe. Following the successful completion of its first science run in November 2021, the detector has now concluded a new science run in August 2023, leading to blinded analyses with an accumulated exposure of 3.1 tonne × year. In this talk, I will present updated results from XENONnT, covering both spin-dependent and spin-independent WIMP-nucleon interactions for WIMP masses above 10 GeV/c². I will also discuss signal & background modeling efforts undertaken to better understand the dominant sources of background, specifically accidental coincidences and double electron capture of Xe-124.

Collaboration you are representing

XENON

Author: PIERRE, Maxime (Nikhef)

Presenter: PIERRE, Maxime (Nikhef)

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